development has not been satisfactory. In Western Ukraine small mills continued to operate with an output in 1932 of about 4 million t flour (and 170 000 t barley groats). 256

The oil industry manufactured native products and is best developed in the Kuban area. In 1934, 90 000 t oil were produced, and in Dnipro-Ukraine 58 000 t = about 40 % of the total production for USSR. Large oil plants have been constructed since then in Slovjanske, Dnipropetrovske and Krasnodar. 258

More than ¾ of the canned food required for the whole of Russia was produced in Ukraine. There are plans for a large-scale development of this industry. 255

Breweries and distilleries are not yet developed; out of a total number of 225 distilleries, 151 are in Galicia, but they supplied about 40 % of the Soviet production before the first Five-Year Plan. 274

There were about 80 tobacco factories before World War I, with an output of 9 000 t; in 1927/28 there were only 26 factories which produced more than 20 milliard cigarettes, i. e. 360 000 t = 36 — 54 % of the production for USSR. 277

10. Other Branches of Industry

Slate production in Ukraine increased from 2 000 t in 1913 to 14 500 t in 1931; the raw material was manufactured in two plants in Zavalla and Mariupil. 339

A highly developed cement industry in Novorossijske (10 plants) used to produce 633 000 t annually. In 1934, 5 of the plants there produced 1 million t, and with Dnipro-Ukraine 1.5 million t = 45 % of the total production of USSR. Ukraine must come eight in world production. In Dnipro-Ukraine and North Caucasia in the same year, 940 000 t of fire-proof earthenware and dinas bricks were produced, 924 000 t lime, 220 000 t chalk, 207 000 t alabaster and 37 000 t gypsum.

Excellent kaolin is found in Dnipro-Ukraine. In 1913 34 400 t and in 1931, 78 500 t were produced. In 1928 the 11 porcelaine factories in the country had an output of 18 700 t (⅓ of total 323

323 Soviet production). These, it is true, were small and old-fashioned factories; an enormous factory with an annual capacity of 40 000 t per annum has been planned and probably also erected in Mariupil. The glass industry is poorly developed, although its produce represents in value one third of the total production for the USSR. A large glass factory with an annual production capacity of 60 000 t was erected in Lysychansk. There is an extensive leather industry and a small production of paper, matches, india-rubber and textiles. The manufacture of soap, fats and chemical and pharmaceutical produce is fairly well developed. Arts and crafts which are largely practised in the family are on a very high level.

Production of Building Materials

339 In connection with the reconstruction work being carried out in
185 the Ukraine, the production of building materials is extremely important. The Five-Year Plan lays down that the pre-war production of bricks is to be increased by 50 per cent. of tiles, by 170 per cent. of lime, by 120 per cent., and of gypsum by 190 per cent. The Plan also states that

> "Plants for the production of building materials - including cement, glass, brick, lime, and tile works, plants producing metal fixtures, prefabricated houses, building sections, plumbing fixtures, roofing materials and high tensile gypsum - shall be restored or built and stable local fuel and power supplies created for the building material plants."

The Ukrainian output of cement in 1950 is expected to be 2,065,000 tons as compared with 10,500,000 tons for the entire U.S.S.R.

●[323] Under the jurisdiction of the Republic and local authorities there are to be put into operation in the years 1946-50 glass works with a capacity of 11-33 million square feet of glass, brick kilns with a capacity of 9 million bricks, and rolling mills and other building material plants.

Transport

727 The war and the occupation brought great devastation to the
489 transport system of the Ukraine. The greater part of the railroads were partially or completely destroyed, and many hundreds of railway bridges demolished. The port of Odessa on the Black Sea was systematically destroyed - piers, warehouses, elevators, floating cranes, and power supply. The Dnieper-Bug Canal, the only water outlet towards the west, was made impassable by the Germans, who destroyed the sluices, wrecked bridges, sank boats in midstream, and choked the canal with mud.

185 The Five-Year Plan, 1946-50, provides for the complete rehabili-
489 tation of Ukrainian transport. Railway lines and junctions, and locomotive and car repair works are to be fully restored. A number of railway lines are to be electrified; and west of the Dnieper several narrow gauge lines are to be constructed for closer connection of sugar beet growing areas with sugar refineries.

185 To alleviate the difficult situation in rail transport, motor
489 roads are to be rebuilt and extended. The Moscow-Kharkov highway is
494 to be rehabilitated and improved, and additional motor roads are to be built to connect towns of the Ukrainian S.S.R. with the towns of the North Caucasus and the Crimea. By 1950 the tonnage of freight transported by road should be 16 times the pre-war volume. The number